



### Responsible worm control

(Sarah Mosley, BVSc, MRCVS)

Worm levels need to be controlled in horses in order to keep a healthy level of infestation. A low worm burden stimulates healthy immunity against further infestations but heavy burdens cause problems such as colic, diarrhoea and weight loss and can even be fatal.

There are **two** main ways in which to control worm burdens:

- **Pasture management** - fields should not be overgrazed, ideally there should be no more than 1 horse per acre and grazing fields should be rotated so that the pasture gets to rest for 3 months. Dung should be picked up minimum once a week and should not be used as fertiliser on fields grazed by horses. If possible mixed grazing with cattle or sheep helps keep the worm burden low. Some worms can be passed between species so co-grazed animals also need to be on a worm control plan.
- **Drug treatments (wormers/anthelmintics)** - these are used to kill adult worms so that they can not produce eggs which are shed onto the pasture. **Overuse of these drugs leads to worms developing resistance which is becoming an increasing problem.** If this is not controlled then the drugs we currently rely on will not work in the future, so we need to target the use of wormers. **The mainstay to this is to perform faecal worm egg counts (FECs) prior to worming (every 3 months) and only treat if over 200-300 (depending on which laboratory dose the test) eggs per gram (epg) are found. This regularly yields the result of not needing to worm, as the test is cheaper than the drugs, it is usually a cost effective way of controlling worm burdens.**

#### Types of worms:

##### Strongyles

- **large redworms:** largely well controlled due to use of anthelmintics, immature larvae migrate from the gut into the blood vessels where they can create a clot and cut off the blood supply to a section of intestine.
- **small redworms (Cyathostomes):** these can be hard to detect and kill, as they hibernate over

winter by encysting in the gut wall where drugs can not get to them, mass emergence in spring can cause life threatening damage to the gut wall. Hence using a wormer effective against these encysting stages (moxidectin or 5 day course of fenbendazole) is needed in the autumn, despite FEC results.

- **Tapeworms (Anoplocephala Perfoliata)** : these live in the mid section of the gut known as the ileo-caecal junction, they are related to spasmodic and impaction colic. Faecal testing is insensitive to determining infestation due to the infrequency of shedding hence a blood and saliva test have been developed. Due to cost these tests are not always performed and routine treatment (praziquantel or double dose pyrantel embonate) is given once a year. As their life cycle takes 6 months, if infestation is suspected or confirmed twice yearly worming is recommended.
- **Bots (Gasterophilus flies)** : these lay eggs on the horses coat and around the mouth, the larvae migrate to the mouth and are eventually swallowed and mature in the stomach where they can cause ulcers. They are then passed out in the faeces to develop into flies again. If larvae/immature worms are seen in faeces or the eggs found on a horse it should be treated with ivermectin or moxidectin.
- **Pinworms (Oxyuris Equi)** : Adults live in the rectum and lay their eggs on the skin surrounding the anus which causes severe skin irritation. As the eggs stick to the skin rather than being passed in the faeces they are often not picked up on a FEC. Most wormers are effective against them, unless clinically affected, the once yearly autumn worming to protect against cyathostomes will also cover pinworms.
- **Ascarids (Parascaris Equorum)** : mainly a problem to young stock, larvae migrate from the guts to the liver then to the lungs where they are coughed up and swallowed, they develop into adults in the intestines where they can reach up to 40cm and cause impactions. Hence the need for separate broodmare and young stock worming plans.



#### Offers - September

Equest 700g (Roundworm) **£11.75**

Equest Pramox ( Roundworm & Tapeworm) **£18.75**

**Worm egg count £11.40 (drop your sample into the vets)**

## Types of wormers:

- **Benzimidazoles**

- **fenbendazole (Panacur)**
- **mebendazole (Telmin)**

effective against strongyles, pinworms and ascarids, only effective against encysted cyathostomes if using 5 day course of fenbendazole. Confirmed resistance to these drugs, if using, recommended to do a FEC 2 weeks post treatment from time to time to check efficacy.

- **Tetrahydropirimidines**

**pyrantel embonate (strongid-p, strongid caramel, pyratape P, exodus),**

effective against strongyles, pinworms, ascarids and if using a double dose, tapeworms.

- **Macrocyclic lactones**

**ivermectin (eqvalan, panomec, furexel, eraquell and noramectin)**

**moxidectin (equest)**

effective against strongyles, pinworms, bots and ascarids, only moxidectin

effective against encysted cyathostomes.

- **Praziquantel (equitape)** effective against tapeworms.



**N.b. Combination wormers**

- **praziquantel+ivermectin (equimax and eqvalan duo)**

- **praziquantel+moxidectin (equest pramox)**

Every situation is different and if wanting help to develop a programme which fits in with your system please get in contact with the surgery. A basic guide to follow is:

- **Spring (March, April, May)** - FEC every 3 months, worm if over 200-300 epg, cover for tapeworm if suspected/confirmed.
- **Summer (June, July, August)** - FEC every 3 months, worm if over 200-300 epg, be vigilant for signs of bots
- **Autumn (September, October, November)** - FEC every 3 months, worm if over 200-300 epg, treat for encysted cyathostomes and test or cover for tapeworm.
- **Winter (December, January, February)** - FEC every 3 months, worm if over 200-300 epg.

Remember, if having to worm at the 3 monthly FEC check times, rotate between the different classes of wormers (benzimidazoles, tetrahydropirimidines and macrocyclic lactones) to reduce the development of resistance.

## Broodmares and youngstock:

Young horses are more vulnerable to picking up worms and developing disease, so control programs need to be more vigorous. Ascarids and strongyles are the main concern, with encysted cyathostomes being a concern the following spring.

- Pasture management - foals should be put on the least heavily grazed pasture, ideally not been grazed by horses for 12 months, and not grazed by foals the previous year, pick up dung more regularly, minimum twice a week.

## Drugs:

- **broodmares:** FEC and worm if over 200-300 epg in the last month of pregnancy and 3-4 weeks after foaling.
- **youngstock** (below 18 months): again every situation is different depending on your system, if wanting individual advice please contact the surgery. A good basic protocol to follow is: 1st treatment at 6-8 weeks of age with fenbendazole to treat ascarids (as ivermectin, ascarid resistance is becoming a problem), FEC every 2 months and treat according to types of worm found (e.g. strongyles or ascarids) until weaning, when worming is reduced to 3-4 monthly intervals. A treatment for encysted cyathostomes should be given in autumn and tapeworm treatment at least once yearly. Note that moxidectin can not be given to foals under 4 months of age and moxidectin+praziquantel (equest pramox) can not be given to foals under 6.5 months of age.

## Quarantine of new horses onto the premises:

New arrivals should always be isolated for 2-3 weeks for infectious disease control, they should also be kept off pasture used for equine grazing in this time to prevent the introduction of resistant worms. If the new arrival has not been treated for encysted cyathostomes and tapeworms in the last year or treatment history is unknown, treat for these and do a FEC 2 weeks later to check for wormer efficacy, if still above 200-300 epg, please contact the surgery for advice. If encysted cyathostomes and tapeworm treatment has been done in the past year then do a FEC, if above 200-300 epg, worm and re-do the FEC 2 weeks later to check that the wormer has worked before turning out with resident horses.

If you would like any further advice please contact us during working hours with your question and we will get back to you. **01559 363318**